

## ORGANISATIONAL STRATEGIES FOR REDUCING FOOT AND ANKLE INJURIES IN CONSTRUCTION WORKERS

We are writing to you with the hope of assisting your organisation to reduce the burden of WorkCover claims, sick days, improve employee satisfaction and save your business a lot of stress involved with foot and ankle injuries sustained and experienced in the workplace.

We are a husband and wife team: both coming from a healthcare background.

Having seen many construction workers clinically with foot pain and injuries as a result of the rigors of work, we decided that it is time to do something to help.

We propose to provide the following to your staff in order to combat foot and ankle injuries in the workplace:

- An online app
- A foot and ankle injury prevention pack containing prefabricated orthotics, massage roller, stretch band and night splint.

After much research into work related injuries with construction workers we were surprised by the results we discovered. Gaining a greater understanding of your industry has enabled us to recognise shortfalls in OH&S regarding foot and ankle health. With this in mind we have developed interventions to assist your organisation.

### WHY INTERVENTIONS NEED TO TAKE PLACE

- 9% of all injuries in construction occur to the foot and ankle <sup>1</sup>.
- Musculoskeletal disorders are a **major cause of work-related disability and account for absence from the workplace** in occupational groups that require long periods of standing. Workers with lower limb disorders tend to **require longer periods of recovery and require a greater time off** compared to that of upper limb injuries<sup>2</sup>.
- In one study **90% of the respondents revealed that pain and symptoms** were observed after they had engaged in construction activities. Besides, the **majority of the respondents (about 70%) reported that their working efficiency and production were influenced by the pain and symptoms**<sup>3</sup>.
- **High rates of musculoskeletal injuries were found in jobs requiring prolonged standing**, the main areas affected were the back and lower extremities. **Workers often kept working through these injuries stating they thought it was part of the job, unfortunately this can progress to significant pathology**<sup>4</sup>.
- Work-related conditions that may contribute to or **aggravate foot injuries include jobs requiring long periods of standing and walking**<sup>5</sup>.

- 60% of workers had taken time off due to 'minor' injuries, almost 50% having more than 4 days off<sup>6</sup>. **Just over 1% of the working population received workers compensation in that time, with the average cost of a claim of \$32 774** <sup>7</sup>.
- **"There is compelling evidence from numerous studies that as the amount of biomechanical stress is reduced, the prevalence of musculoskeletal disorders at the affected body region is likewise reduced"** <sup>8</sup>.
- **Muscular stress with no objects being handled has been found to account for (31.6%) of workplace injuries**<sup>9</sup> This figure is not related to falls, accidents or incidents, purely stress from overuse, such as from long periods of standing.
- **The effects of prolonged standing may result in performance decrement, such as low productivity and efficiency, increased medical costs, and demoralised workers**<sup>10</sup>.
- **Lower rates of sick leave, burnout, work cover claims and greater employee satisfaction reduces turnover of staff**<sup>11</sup>. This turnover of staff is costly to the organisation, both financially and negatively affects customer satisfaction.

As you can see from the above information there is a significant cost to organisations from failing to adequately take into consideration foot health and preventative measures to reduce injuries to the foot and ankle. We believe that there is far more that can be done to assist than just the use of pressure mats.

**Organisations have spent a lot of time, effort and money developing OH&S guidelines for the prevention of back injuries** Investment into equipment that reduces the load placed on the backs of workers have now been utilised for many years, **but not enough has been done for foot and ankle injuries ...this is where we come in!**

Our aim is to work with your organisation to reduce foot and ankle injuries. We intend to use a multifaceted and well-structured approach to address these underlying issues.

Education is key. We are able to provide information on a number of strategies to reduce causative factors along with the provision of physical modalities to assist.

## **EVIDENCE BASED INTERVENTIONS TO REDUCE FOOT AND ANKLE INJURIES**

1. **FOOTWEAR** – Selecting the correct footwear for the individual is very important. Feet come in different shapes and sizes, there is no one size fits all approach to this. Information in our app guide workers to select appropriate shoes in regards to support, structure, protection and reduce the risk of slips and falls. The correct footwear and education regarding foot health and footwear choice could improve working conditions for workers and impact the high number of injuries repeatedly recorded in jobs that require prolonged periods of standing<sup>12</sup>. Shoes with correct non slip soles have been shown to decrease slipping by 50%<sup>13</sup>.
2. **SIMPLE HOME STRENGTHENING PROGRAM** – It is commonly thought that standing all day makes your feet strong – this in fact is not true but quite the opposite, prolonged standing makes overuse injuries more common. By strengthening the feet we reduce the likelihood of soft tissue injuries. Prevention of injuries and reducing re-occurrences of work related injuries will save a lot of pain, effort and money<sup>14</sup>.

3. ORTHOTICS – Utilising a prefabricated orthotic in the shoes of staff will help improve comfort, reduce stress in the muscles, specifically target pressure areas and help prevent foot and ankle injuries from occurring<sup>15</sup>. In occupations standing at least 75% of the time orthotics decreased foot, back and leg pain<sup>16</sup>. Studies also promote the use of cushioned orthotics in combination with pressure mats for a superior outcome<sup>17</sup>.
4. Massage roller – Overuse injuries from prolonged standing and repetitive tasks can be reduced by using a simple massage tool at home. Massage has been shown to help prevent and treat injuries to the feet including plantar fasciitis<sup>18</sup>.
5. Stretch band - Stretching the muscles of the lower limb prior to work has been shown to reduce injuries in workers<sup>19</sup>
6. Night Splint- The night splint provides prolonged stretch and compression which has been proven to reduce pain and discomfort for the wearer and further help with venous return improving comfort after periods of weightbearing and exercise<sup>20 21</sup>.

From research it is known that education in regards to preventative measures in work places has been shown to have a **positive effect on prevention and control of work related musculoskeletal disorders**.<sup>23</sup>

We believe that we can help reduce risk of workplace injuries, reduce sick leave as a result of foot and ankle conditions, reduce burnout and improve job satisfaction.

How positive it would be for an employee to see their organisation taking steps to support staff who complain of tired and painful feet as a result of standing all day. If the employees are happy that their organisation is taking proactive steps in improving their health, this significantly improves job satisfaction and combats burnout.

For the employer, utilising these steps will help reduce staff turnover, reduce the burden of WorkCover injuries and make the workplace a more productive setting. There may also be the benefit of reducing insurance premiums over time by the prevention of injuries.

## **A PRACTICAL APPROACH TO REDUCING FOOT AND ANKLE INJURIES**

We are happy to work with your organisation to ascertain the requirements, though below is a list of what we believe to be a well-rounded solution for your organisation.

### **WORKPLACE FOOT AND ANKLE INJURY PREVENTION PACK:**

1. ONLINE APP – We have developed an app available from both the Google Play and Apple App Store. This app has been specifically designed and contains information on all aspects of our program. Including the following:
  - > **FOOTWEAR:** diagrams, videos and written information of useful features to inspect when purchasing safety footwear/ boots including: correct sizing, supportive features and correct build of a shoe. **THERE IS MORE TO SAFETY IN A BOOT THAN JUST A SAFETY CAP.** We list shoes that fit these criteria within various price ranges from affordable on a family budget to the more expensive options. There are photos of the shoes along with links for further information.

- HOME STRENGTHENING PROGRAM – Diagrams, videos and written information with an easy to use daily exercise program that can be completed within ones daily schedule. This program is flexible and adaptable so your staff are not inconvenienced.
  - OH&S GUIDE – This guide states ways to help reduce general workplace injuries, based off WorkSafe Australia guidelines. We also have a guide to assist your employee if they are unfortunate enough to suffer an injury. This includes seeking appropriate medical advice and reporting of injuries to workplace OH&S/HR manager.
2. FOOT AND ANKLE INJURY PREVENTION PACK – A pack containing the following items to help reduced workplace injuries. The app contains diagrams, videos and written instructions on the correct use of each item.
- > PREFABRICATED FOOT ORTHOTICS –These specifically designed prefabricated orthotics have been made in a way to make them suitable for those working on their feet all day- that is why we love them. These orthotics are appropriate for nearly every foot type.
    - Great support through the medial arch of the foot – this helps support the foot and takes weight off the muscular structures, bones and joints.
    - Thick gel heel and forefoot cushion – this absorbs the force going into the body and allowing all day comfort.
    - Moisture wicking top cover to reduce blisters and sweaty feet.
  - > MASSAGE ROLLER – A massage roller that can be used on a number of areas of the body. We will focus on the foot and calf region as this is the area our research has covered. This is lightweight, biodegradable and manufactured in a way that reduces its environmental impact.
  - LOWER LIMB STRETCH BAND – A very effective tool to help stretch out tired and sore feet. This band helps stretch the main joints of the lower limb in one simple exercise. This stretch band fits feet from size women’s US 4 up to men’s US 14.
  - NIGHT SPLINT – The night splint offers both a long term stretch along with compression to the lower leg. This can be worn over night or for extended periods of time whilst sitting- such as on the couch.

We are able to supply your organisation with this product in person at your workplace, or remotely via an online questionnaire for sizing with delivery straight to the staff member. There is scope for us to personalise the app with additional information if you require.

With the above research and information supplied, we believe this a cost-effective option that would be both welcomed and have positive impacts on your staff and you as an organisation.

We will be looking at compiling a survey at days 30 and 90 to follow up with staff on how they have perceived the program. Questions relating to utilisation of the products and information supplied, comfort at work, overall satisfaction and if pain or injury incidences have reduced. Employee feedback will remain anonymous. We can use this information to further enhance this experience for the employee and your organisation by providing you with concise feedback on the program and your investment.

The investment in this prevention kit is \$100 per employee. As stated, next to the cost of injuries, sick days, WorkCover and staff turnover, this is a very low cost to incur initially and would save your organisation significantly in the medium to long term.

fasciitis.com.au are fully covered with public liability and professional indemnity insurance.

We look forward to working with you in the near future and implementing this program.

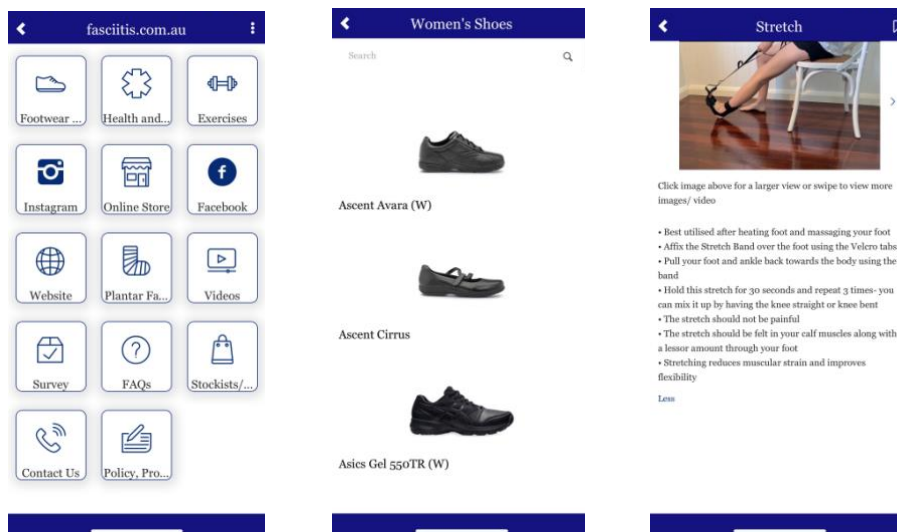
Please feel free to contact our representative regarding this if you have any questions or require further information 0421 449 368.

Many thanks,

The Team at fasciitis.com.au

## fasciitis.com.au Program

### App



### Workplace Foot And Ankle Injury Prevention Pack



fasciitis.com.au Prefabricated Orthotic



Massage Roller



Stretch Band



Night Splint



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